

NOMENCLATURAL CLARIFICATION OF
TWO SPECIES OF VERBESINA (COMPOSITAE)
ENDEMIC TO FLORIDA¹

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Two species of *Verbesina* are evidently endemic to Florida. One of these is restricted to a few coastal counties of the Apalachicola region of western Florida whereas the second has been collected from several counties in northeastern Florida. The species are disjunct by approximately 150 miles and are readily distinguished from each other by several morphological features. Most notably, the eastern species has decurrent leaves which form winged stems and has rayed heads whereas the western species has wingless stems and rayless heads. I have examined approximately 50 collections of these species and have observed no exceptions to these differences.

In 1822 Nuttall was the first to describe the eastern species, naming it *Actinomeris pauciflora* and in 1841 he elaborated on his original description. *Actinomeris pauciflora* was described as having decurrent leaves and 3-4 rays. The description was based on a collection made by Ware. I have been unable to locate this specimen and do not know whether it still exists. However, there is no doubt as to the species being described.

In 1872 Chapman applied the name *A. pauciflora* Nutt. to a coastal species from western Florida. The species was described as having wingless stems and the florets as having "the marginal ones abortive." Chapman's lucid description leaves no doubt that he was erroneously applying the name *A. pauciflora* Nutt. to the species from the Apalachicola region. In 1878 Chapman, evidently still unaware of his error, redescribed the eastern species as new, giving it the name *Actinomeris heterophylla*. He described *A. heterophylla* as having winged stems, 5-10 rays and as oc-

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curring in eastern Florida. I have examined the type and it clearly belongs to the eastern species.

The next event in the nomenclatural history of these species occurred in 1883 when Gray transferred the eastern species to *Verbesina* forming the combination *V. heterophylla* (Chapm.) A. Gray. Although no description was provided, Gray did list *Actinomeris heterophylla* Chapm. as a synonym. The description Gray provided in his Synoptical Flora (1884) clearly reveals that he was referring to the eastern species. In his 1883 publication Gray also transferred *A. pauciflora* Nutt. to *Verbesina*. However, since the specific epithet was preoccupied by a Mexican *Verbesina* described by Hemsley in 1881, he formed the new name *Verbesina warei* A. Gray and gave *Actinomeris pauciflora* Nutt. as a synonym. Gray's description of *Verbesina warei* in his Synoptical Flora is confusing in that he described the stems as wingless but described the heads, in quotes, as being 3-4 rayed. He stated that the species occurs near the coast but did not specify the eastern or western coast. Collections by Ware and by Chapman were cited; however, Chapman collected both species and, as far as I am aware, Ware collected only the eastern. There is, therefore, serious doubt as to whether Gray was applying the name *Verbesina warei* to the eastern or western species. These species had been very infrequently collected prior to 1884 and it is possible that Gray never saw specimens of one or the other or either species. It appears probable that Gray compiled his description of *V. warei* largely or entirely from Nuttall's and Chapman's descriptions of *Actinomeris pauciflora* Nutt. It should be recalled that Chapman's description was actually of the eastern species. Were this assumption true, it could account for the mixing of characteristics of both species in Gray's description of *Verbesina warei*, for his use of quotes in referring to the rayed condition and to his failure to indicate whether the species occurred on the east or west coast as the two descriptions conflict on this point. In citing the collections of Ware and Chapman, Gray was probably again simply following Nuttall and Chapman.

In their revision of the genus *Verbesina*, Robinson and Greenman (1899) applied the name *Verbesina heterophylla* A. Gray to the eastern species and listed *Actinomeris heterophylla* Chapm. in synonymy. The western species was called *Verbesina warei* A. Gray and *Actinomeris pauciflora* Nutt. was given as a synonym.

Small (1903), in his *Flora of the Southeastern United States*, also called the eastern species *Verbesina heterophylla* (Chapm.) A. Gray, but formed a new combination, *Verbesina pauciflora* (Nutt.) Small, for the western species and listed both *Actinomeris pauciflora* Nutt. and *Verbesina warei* A. Gray in synonymy. Small also was evidently unaware that Nuttall's name was originally applied to the eastern species and was either unaware of, or ignored, the fact that the combination *Verbesina pauciflora* was preoccupied.

Alexander, in treating these species in *Small's Manual of the Southeastern United States* (1933), transferred both to the genus *Pterophyton*, forming the new combination *P. pauciflorum* (Nutt.) Alex. for the western species and *P. heterophyllum* (Chapm.) Alex. for the eastern species. The genus *Pterophyton* Cass. had been reduced to a section of *Verbesina* by Torrey and Gray in 1842. This reduction appears justified when the genus *Verbesina* is considered in its entirety rather than on a regional basis.

The question arises as to the correct names for the two species under consideration. Although the earliest binomial applied to the eastern species is *Actinomeris pauciflora* Nutt. (1822), the epithet *pauciflora* cannot be used in combination with *Verbesina* since the combination *V. pauciflora* is preoccupied by Hemsley's Mexican species. The second oldest binomial given to this species is *Actinomeris heterophylla* Chapm. (1878), the specific epithet of which was transferred by Gray to form the correct name for the eastern species, *Verbesina heterophylla* (Chapm.) A. Gray.

Although *Verbesina warei* A. Gray has been used fairly commonly for the western species, Gray did give *Actinomeris pauciflora* Nutt. as a synonym in making the transfer.

The name *Verbesina warei* A. Gray is, therefore, associated with the type of *Actinomeris pauciflora* which belongs to the eastern species. *Verbesina warei* must then be considered a synonym of *V. heterophylla* (Nutt.) A. Gray.

Verbesina heterophylla (Chapm.) A. Gray, Proc. Amer. Acad. 19: 12, 1883.

Actinomeris pauciflora Nutt., Sill. Journ. 5: 301, 1822; Trans. Amer. Phil. Soc. 7: 364, 1841. Type: East Florida, Ware s.n. (location unknown).

Actinomeris heterophylla Chapm. in Coult., Bot. Gaz. 3: 6, 1878. Type: East Florida, Chapman s.n., 1871. (NY!)

Verbesina warei A. Gray, Proc. Amer. Acad. 19: 12, 1883. nom. nov. for *A. pauciflora* Nutt., not *Verbesina pauciflora* Hemsl. 1881.

Pterophyton heterophyllum (Chapm.) Alex. in Small, Man. S. E. Fl. 1444, 1933.

The earliest description of the western species was given by Chapman in 1872; however, he failed to recognize it as a new species and misidentified it as *Actinomeris pauciflora* Nutt. Probably the most commonly used name for this species is *Verbesina warei* A. Gray. However, this name belongs to the eastern species. Since the western species has never been given a valid name, it is described as a new species.

Verbesina chapmanii J. R. Coleman, sp. nov. Perennis ca 0.5-1.1 m alta; caulis simplex non alatus; folia opposita vel alterna, sessilia vel subsessilia, lanceolata, elliptica vel lata, scabra; capitula 1-5 terminalia pedunculata, plerumque 1-2 cm lata, discoidea; involucra 2-seriata, ca 8-12 mm elliptico-oblonga, plerumque 5-9 cm longa, usque ad 3.2 cm alta; flores lutei; achaenia alata, oblongo-obovata, plerumque 6-8 mm longa, 4-5 mm lata, glabra vel subglabra, epapposa vel pappi setis usque ad ca 1 mm longis praedita.

Perennial herbs mostly 0.5-1.1 m tall with heavy rhizomes; stems numerous, unbranched below the inflorescence, wingless, hispidulous near the heads, otherwise glabrous or subglabrous; leaves alternate or opposite, be-

coming bractiform above, rigid, sessile or subsessile, lanceolate, elliptical or elliptic-oblong, serrulate to subentire, obtuse or less frequently acute, to ca 12 cm long, commonly 5-9 cm long, to ca 3.2 cm wide, scabrous; inflorescence solitary or to 5-headed; heads mostly 1-2 cm wide, discoid; phyllaries 2-seriate, ca 8-12 cm tall; florets yellow, mostly 12-14 mm tall; paleae ca 8-10 mm tall, mostly red-purple apically; achenes mostly red-purple, oblong-obovate, mostly 6-8 mm long, 4-5 mm wide, glabrous or sparingly hirtellous apically, lateral wings to ca 1 mm wide, continuous about the crown to form a shallow cup, pappus of 2 short horns or lacking.

Type: open prairie-like pine-cypress savanna, 3 mi N of Orange, Liberty Co, Florida, *McDaniel* 4468 (GH!)

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